

## MDW ACCIDENT PREVENTION PLAN HANDBOOK

### FORKLIFTS

**Safety Training Goal:** Understanding the tasks associated with forklifts, i.e., safe forklift operation, including loading and unloading.

#### 1. Introduction.

Forklifts are special purpose equipment that are immensely useful for handling heavy materials when operated properly. But they also can be very dangerous if used improperly or if the operator is not focused on safety at all times. In fact, more than 2,000 serious injuries per year are connected to improper forklift operation.

#### 2. Discussion.

a. Handle Forklifts with Care. Forklifts are not designed to be handled like cars. They are balanced differently and, because they are open vehicles, they do not have certain kinds of built-in protection. Typical dangers of forklifts include:

- (1) Tipping over.
- (2) Heavy loads falling off the lift.
- (3) Collisions.
- (4) Injuries to bystanders.

b. Safe Operation. Because forklifts can be dangerous, OSHA has a lengthy standard that specifies rules for safe operation. First and foremost, forklifts should be used only by trained, qualified operators. A training session such as this one is not a substitute for the complete training that is required, but it is useful as a safety review, both for operators and for other employees who work around forklifts.

c. Do's and Don'ts of Forklifts. There are many specific rules that apply to safe forklift operations. Most of these boil down to using common sense and staying focused on safety at all times.

(1) Here are some examples of good safety practices that should be followed:

(a) Inspect the forklift daily and report any problems. Don't use it if it is overheating or parts (especially the forks) are damaged.

(b) Wear appropriate personal protective equipment - especially hard hats.

(c) Keep loads centered to avoid losing balance and

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tipping over.

(d) Keep loads low to the ground when moving-about 6 or inches is correct.

(e) Drive with the load uphill on inclines.

(f) Watch out for pedestrians and objects that might be in the way.

(g) Drive slowly and carefully.

(h) Park on a flat surface away from traffic, and set the parking brake.

(i) Be completely familiar with the operator's manual, and follow its instructions.

(2) Here are examples of things *not* to do with a forklift:

(a) Don't drive forward if a load blocks your vision - drive it in reverse instead.

(b) Don't overload the forklift beyond its rated capacity.

(c) Don't travel with loads mounted so high that the forklift could tip over.

(d) Don't raise or lower loads while the forklift is moving.

(e) Don't carry people on the forks, unless there is an approved manlift.

(f) Don't let anyone walk under the forks, whether or not they're loaded.

(g) Don't speed, especially at sharp corners or on wet or slippery surfaces.

c. Proper Loading and Unloading. The most complex part of operating a forklift is in the actual loading and unloading of objects, because many actions are going on during a short period: moving forward, moving backward, positioning the load, raising and lowering the load, moving it into position. For this reason, it's especially important to remember the basic rules of safe loading and unloading.

(1) When loading:

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(a) Check the load before loading. Make sure it's not too heavy, that you're using the proper equipment, and that unstable or unbalanced loads are properly secured.

(b) Make sure the forks are at the correct width and height.

(c) Approach the load squarely.

(d) When the load is on the forks, tilt the mast back, and tilt back slightly further before traveling.

(2) When unloading:

(a) Turn the forklift slowly into position.

(b) Tilting the load forward and lower it into its new location-slowly.

(c) Pull the forks back slowly.

(d) Check and double check all overhead clearances.

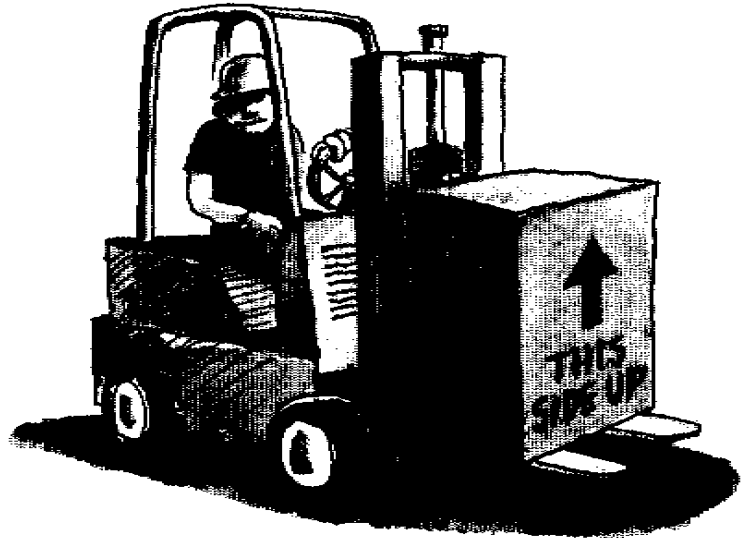
(e) If stacking, know how high the load can be stacked safely.

(f) If loading onto a truck at a loading dock, make sure the dock plate is secure and the truck's wheels are chocked.

### 3. Conclusion.

Remember that forklifts are specialized tools that should only be operated by trained, qualified personnel. It's never acceptable for operators to take chances or fool around, and it's equally unacceptable for employees working around forklifts to distract the operator or invite him or her to do something foolish or unsafe. A forklift accident is likely to have very serious consequences, including major injuries or even death.

# Working With Forklifts



Forklifts are powerful machines. While they don't go as fast as cars or trucks, they require even more attention to safety. Forklifts are steered by the rear wheels, so they require different steering techniques. They're also taller and narrower than a car and can tip over more easily. Even the most experienced forklift drivers need to review and follow basic forklift safety rules. Reduce your risks by putting safety first.

## Before You Drive

- ✓ Check your horn, lights and brakes each day before you start the engine.
- ✓ Look around for any hazards that may obstruct your route and figure out how to correct them.
- ✓ Wear a safety belt.
- ✓ Make daily vehicle inspections.
- ✓ Follow proper load handling procedures.

## Watch for Pedestrians

Pedestrians are involved in the majority of forklift accidents. In a crowded building with lots of noise, don't assume pedestrians can hear you coming. Forklifts are frequently operated in narrow aisles full of obstructions, including racks and building columns, that can create blind areas. Forklift operators need to take special caution near pedestrian "intersections." One second, the aisle can be clear, and the next second, someone can come flying directly into your path. Prevent injuries by keeping others' safety in mind when you drive.

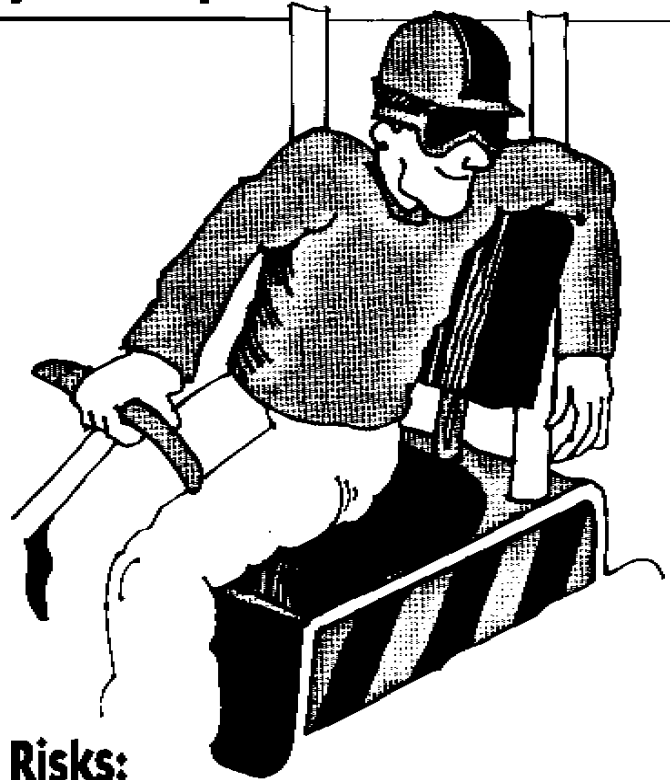
## FORKLIFT DRIVING BASICS

- ✓ **Avoid sharp turns and fast speeds.** They can shift your load and cause you to tip over.
- ✓ **Keep loads low.** Too-tall or top-heavy loads can obstruct your vision or cause you to tip over.
- ✓ **Drive backward when you must move a high load,** and face the direction of travel.
- ✓ **Drive backward down slopes** with more than a 10 percent incline.
- ✓ **If you have to park on a slope, always block wheels,** lower forks and set the parking brake.
- ✓ **Never carry other people** unless the forklift has approved people-lifting devices.
- ✓ **Keep loads within your vehicle's rated capacity.**
- ✓ **Never raise or lower loads while moving.**
- ✓ **Start and stop gradually** to avoid load shifting.
- ✓ **Use your horn at corners, crossings or before reversing.**
- ✓ **Back out slowly** after unloading, checking over your shoulder to make sure it's clear.
- ✓ **Respect speed limits.**
- ✓ **Look in the direction you're driving.**

# Forklift Rights, Wrongs, Risks, and Rules

## Rights:

- **Inspect** the forklift daily and have any problems fixed before you use it.
- **Refuel** or recharge only in designated areas—and don't smoke there!
- **Keep** loads low (6-8 inches above ground), with mast tilted slightly back.
- **Keep** wide loads centered.
- **Be sure** you have overhead protection; wear a hard hat if required.
- **Keep** the load uphill on inclines.
- **Drive** in reverse if the load blocks your vision, except on slopes.
- **Back out** slowly after unloading, checking over your shoulder.
- **Park** on flat surfaces away from traffic. Lower and flatten forks, and set parking brake. If you have to park on a slope, block the wheels.



## Risks:

**You** can be injured or killed if the forklift tips over.

**Others** can be injured or killed if they walk under the load, trip over the forks, or are hit by forks or improperly loaded materials.

## Wrongs:

**Don't** carry passengers or lift people unless the truck has approved man-lifting devices.

**Don't** load the truck beyond its rated capacity.

**Don't** carry a load that is so high it can cause the forklift to tip over.

**Don't** raise or lower loads while you're moving.

**Don't** let anyone walk under the forks.

**Don't** travel with forks raised when unloaded.

**Don't** reach through the mast.

## Rules:

● **Don't** speed

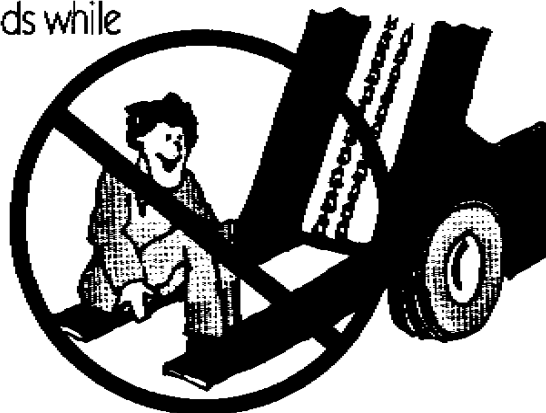
● **Stay** on the lookout for pedestrians.

● **Slow** down for turns and on wet or slippery floor surfaces.

● **Stop** and blow your horn at crossings, blind corners, or before reversing.

● **Stay** at least three vehicle lengths behind the vehicle ahead.

● **Obey** all signs and speed limits.



# Loading and Unloading Forklifts

Forklifts make loading and unloading materials faster and easier, but they can be dangerous if not operated properly. Loading and unloading forklifts presents special accident risks. Follow these basic rules to stay safe.

## LOADING

- ✓ Plan your load. Think in advance how to make each load stable and centered. If the load consists of loose items, stack and secure them carefully.
- ✓ Before driving into trailers, rail cars or trucks, always make sure that the vehicle has been secured, either with chocks under the rear wheels or with another type of restraint system. (Trailer movement is a leading cause of loading accidents.)
- ✓ Don't cut corners by overloading. Overloads remove weight from the rear wheels, thereby causing steering loss. Keep loads well within your vehicle's rated capacity.
- ✓ Never load higher than the height of the backrest, and never carry anything on the overhead guard.
- ✓ Raising and lowering forks is part of loading and should never be done while driving. Loaded or empty forks should be 6 to 10 inches off the ground—high enough so they don't hit bumps, holes or curbs.
- ✓ Plan your route. Know where to expect obstructions, intersections, pedestrians and ramps.

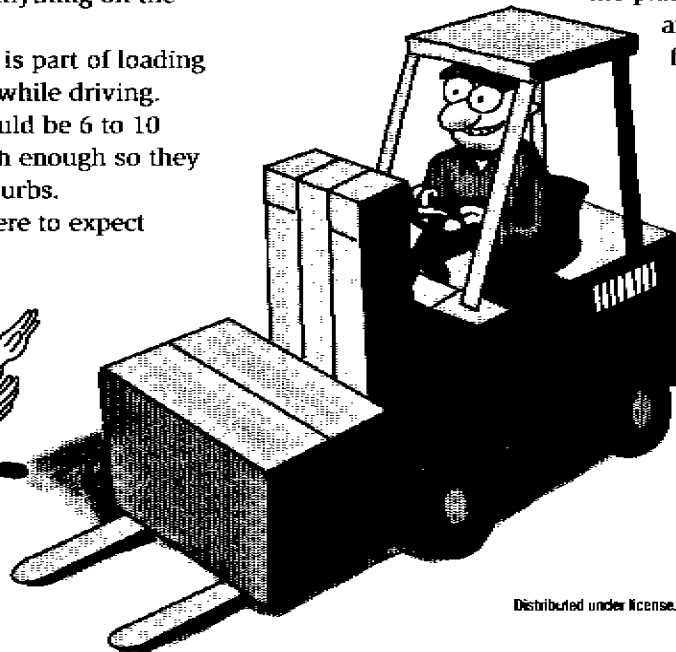


## UNLOADING

- ✓ Whether unloading onto a rack or a truck, take time to position the load accurately.
- ✓ Finish lowering the forks before you back out. Always back out carefully, looking over your shoulder, after unloading.
- ✓ Never place a load in an aisle or a fire aisle or in front of a stairway or fire equipment.

## PEDESTRIANS AND COWORKERS

Most forklift accidents involve people other than the driver. Keep pedestrians a safe distance away from your vehicle while loading and unloading. If you lift coworkers onto safety platforms, make sure the platform is securely attached and be alert for overhead obstructions. Never travel with anyone on the platform.

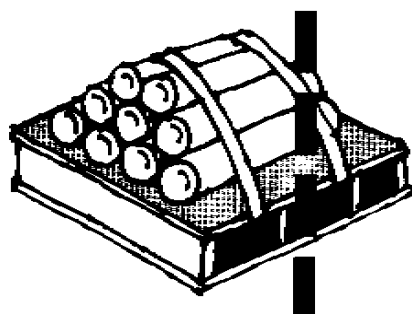


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# Get a Load of This!

## Safe Loading:

### ● Check the load. Make sure it's:

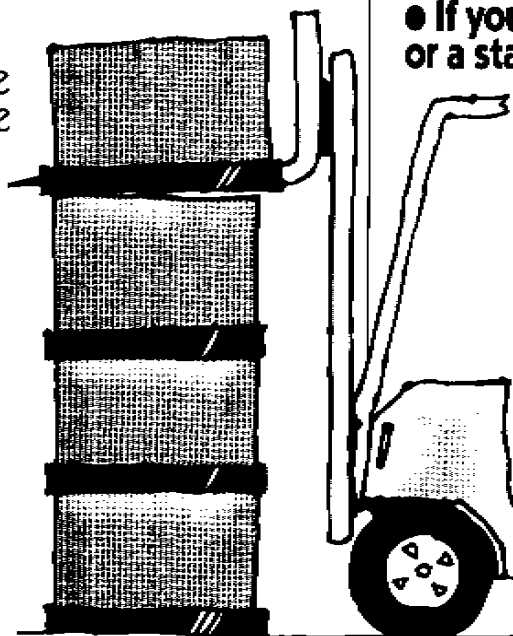


- Within the truck's rated capacity.
- Stable and centered.
- Stack and/or tie loose or uneven loads.

- Use the proper lift fixture for specific loads, such as a carpet spike or drum grapple.

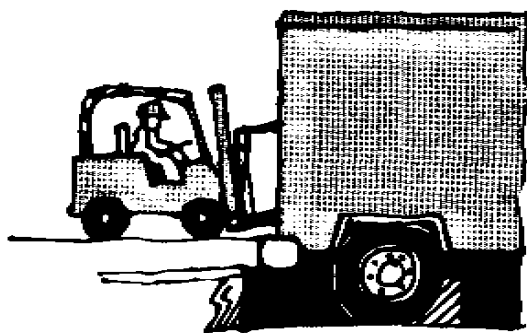
## To pick up the load:

- **Set** the forks wide and high enough to go under the load.
- **Drive** into the loading position.
- **Put** the load squarely on the forks.
- **Drive** under the load until it touches the carriage slightly.
- **Tilt** the mast back.
- **Lift** the load. Tilt the mast back a little more before traveling.



## Safe Unloading:

- **Turn** the forklift slowly into position.
- **Go** straight into trailers or railcars.



### ● If you're unloading onto a truck:

- Make sure the truck's rear wheels are chocked, with brakes locked on.
- Make sure the dock plate is secure and won't move.
- Position the load, tilt it forward, then release it.

### ● If you're unloading onto a rack or a stack:

- Raise and position the load to the correct height. Be sure to check overhead clearance levels.
- Move the load slowly into position.
- Tilt the load forward and lower it onto the rack or stack.
- Pull the forks back slowly.
- Know how high you can safely stack materials.

# Carbon Monoxide and Forklifts

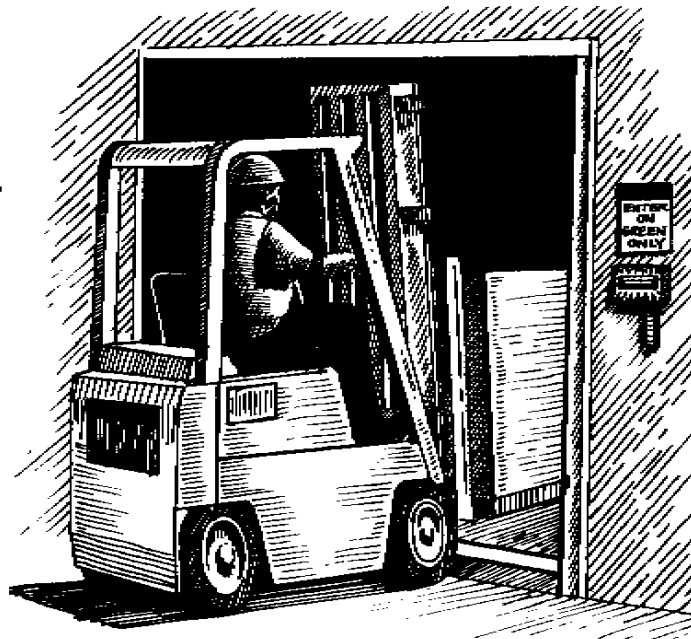
When forklifts are used inside buildings and confined spaces, dangerous levels of carbon monoxide (CO) can build up quickly. CO is a poisonous gas that can cause dizziness and nausea. In high concentrations, it can kill. Because CO is odorless, it's extremely difficult to detect its presence. If you use a forklift in an enclosed or confined area, you and those working nearby may be in danger of CO poisoning.

## REDUCE YOUR EXPOSURE TO CARBON MONOXIDE

- Drive smart. Avoid jerky operation of the hydraulic systems, racing the engine, braking erratically and idling for long periods. All of these increase CO emissions.
- Make sure equipment is properly tuned up. Ask whether your forklift can be fitted with a catalytic converter to reduce CO emissions.

- Cold starts create higher CO concentrations. Start and warm up the forklift outdoors. Avoid storing or parking forklifts in cold areas to reduce warm-up time and exhaust gases.

- Whenever possible, avoid leaving your forklift running inside a shipping truck or other container. Remember, hazardous concentrations build up quickly in confined spaces.



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# Safety Tips for People Working Around Forklifts

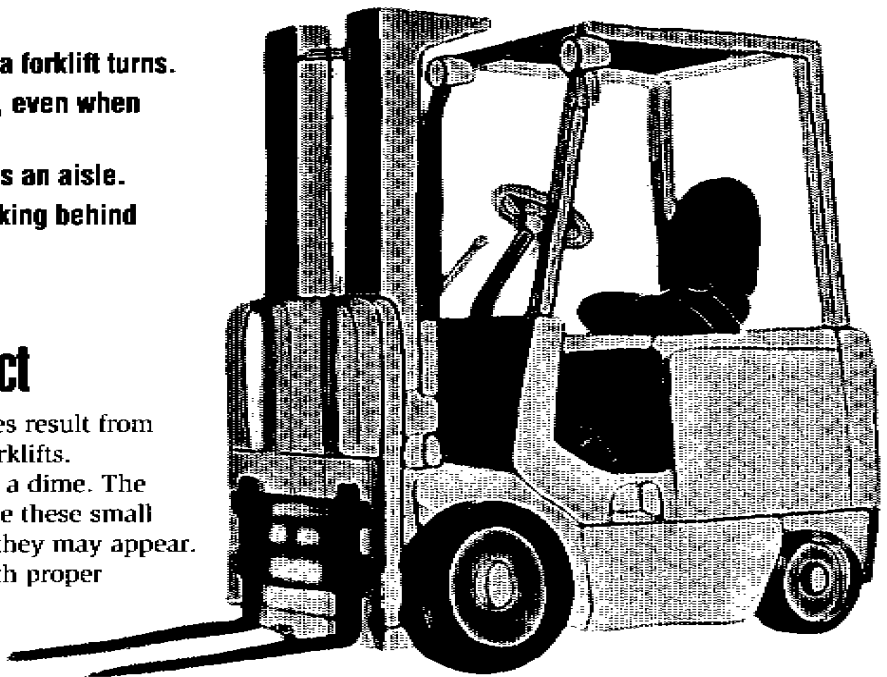
Forklifts can surprise unwary pedestrians in the workplace. Forklifts don't stop quickly and they frequently carry thousands of pounds of awkward loads, which can make a collision especially dangerous.

Each year, approximately 90,000 workers experience some type of injury from forklifts. It's estimated that 60 percent of these injuries are sustained by pedestrians, not operators. Pedestrians can decrease the likelihood of forklift accidents and injuries by understanding the hazards and following these guidelines:

- ✓ **Be aware of your surroundings and pay attention.**
- ✓ **Keep a safe distance from the forklift.**
- ✓ **Stay clear of the fall zone—a full circle around the forklift, which is equal to twice the height of the load it's carrying.**
- ✓ **Make yourself known. Never assume the forklift driver sees you.**
- ✓ **Make eye contact with the forklift operator.**
- ✓ **Check mirrors at intersections.**
- ✓ **Watch out for the tail swing when a forklift turns.**
- ✓ **Never walk under the raised forks, even when empty.**
- ✓ **Never try to "beat" a forklift across an aisle.**
- ✓ **Keep a safe distance if you're walking behind a forklift.**

## Treat Forklifts With Respect

Unlikely as it may seem, many injuries result from standoffs between pedestrians and forklifts. Remember that forklifts can't stop on a dime. The extra-heavy loads they carry can make these small vehicles much more dangerous than they may appear. However, when you treat forklifts with proper respect, you'll be able to steer clear of their dangers.



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